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LIN, WEN TAI				
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/724,588

Applicant(s)

BOUCHER ET AL.

Examiner

Wen-Tai Lin

Art Unit

2154

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 August 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8, 10-14 and 16-42 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8, 10-14, 16-27, 29-40 and 42 is/are rejected.
- 7) ☒ Claim(s) 28 and 41 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 2/08, 3/08
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. Claims 1-8, 10-14, 16-27 and 28-42 are presented for examination.
2. The prosecution is reopened following the recent board decision reversing the examiner's 102(e) rejection on claims 1-8, 10-14, 16-27, 29-40 and 42. Accordingly, the finality of the previous office action is withdrawn and a new ground of 103 rejection based on Bennett is given in this office action.
3. An applicant's duty of disclosure of material and information is not satisfied by presenting a patent examiner with "a mountain of largely irrelevant [material] from which he is presumed to have been able, with his expertise and with adequate time, to have found the critical [material]. It ignores the real world conditions under which examiners work." *Rohm & Haas Co. v. Crystal Chemical Co.*, 722 F.2d 1556, 1573 [220 USPQ 289] (Fed. Cir. 1983), cert. denied, 469 U.S. 851 (1984). (Emphasis in original).

Patent applicant has a duty not just to disclose pertinent prior art references but to make a disclosure in such way as not to "bury" it within other disclosures of less relevant prior art; See *Golden Valley Microwave Foods Inc. v. Weaver Popcorn Co. Inc.*, 24 USPQ2d 1801 (N.D.Ind. 1992); *Molins PLC v. Textron Inc.*, 26 USPQ2d 1889, at 1899 (D.Del.1992); *Penn Yan Boats, Inc. v. Sea Lark Boats, Inc. et al.*, 175 USPQ 260, at 272 (S.D. Fl- 1972).

It is impractical for the examiner to review the references thoroughly with the number of references cited in the case. By initialing each of the cited references on the accompanying 1449 forms, the examiner is merely acknowledging the submission of the cited references and merely indicating that only a cursory review is made of the cited references.

4. The text of those sections of Title 35, USC code not included in this action can be found in the prior Office Action.

Claim Rejections - 35 USC § 103

5. Claims 1-8, 10-14, 16-27, 29-40 and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bennett et al. [U.S. Pat. No. 6345302].
6. As to claim 1, Bennett teaches the invention as claimed including: a system for communication by a local host that is connectable by a network to a remote host [e.g., 276, 1000, Fig.10], the system comprising:
- a communication processing device (CPD) [2000, Fig.3, which is a network interface card] that is integrated into the local host to connect the network and the local host, said CPD including hardware configured to analyze Internet Protocol (IP) and Transmission Control Protocol (TCP) headers of network packets [Abstract; col.15, lines 52-61; i.e., verify the TCP checksum, which is entered in a field of the header (see 322, Fig.7)]; and

a central processing unit (CPU) [10, Fig.3] running protocol processing instructions in the local host to create a TCP connection between the local host and the remote host [col.4, lines 23-50; note that the “TCP connection” is being construed as a physical connection established for transmission of a TCP packet. Since TCP process 91 of Fig. 2B is designed for constructing a TCP packet, the execution of process 91 is in a way “running protocol processing instructions”], said CPU providing to said CPD an IP address and a TCP port that correspond to said connection [e.g., col.4, lines 7-22; col.16, lines 19-35; Figs. 2A, 6-7; note that each encapsulated TCP packet (which contains IP and TCP port information) that is sent out from the CPU also flows through the network card],

wherein said CPD and said CPU are configured such that a message transferred between the network and the local host is generally processed by said CPD instead of said CPU when said CPD controls said connection and said message corresponds to said connection [col.4, lines 60-65; col.12, lines 21-37; col.16, lines 4-35; col.25, lines 32-34; i.e., the message corresponds to the outbound ACK packets and the inbound ACK packets; both are processed within the CPD without involvement of the host CPU, wherein transmission of the inbound and outbound ACK occurs when the CPD has control of the TCP connection (because the CPU is not involved in these activities)].

Bennett does not specifically teach that said CPU providing to said CPD a media-access control (MAC) address.

However, it is well known in the art of Internet communication that in order for an Ethernet node (such as nodes of 106, Fig.1) to communicate another node over the Internet, an

ARP table must be established (at a gateway or in a local cache) to map each destined IP address to its corresponding MAC address. For each IP-MAC pair an ARP request is issued and a corresponding response containing an MAC address is collected. For example, in order for node 1000 (which resides in an ATM network) to communicate with node 276 (which resides in an Ethernet), an ARP table typically resides in node 272 to translate the IP address of node 276 to its MAC address. In order to build up the IP-MAC mapping for node 276, upon receiving a first packet received at node 272 that is destined for node 276, node 272 typically sends out an ARP request by broadcasting node 276's IP address to all the nodes residing in Ethernet 106. In response to the ARP request, only node 276 responds the request by sending its IP and MAC addresses to node 272 for establishing node 276's IP-MAC mapping in the ARP table.

Note that although in the specification Bennett only equips node 1000 (see Fig. 1) with the invented network interface card (NIC), it is obvious to an ordinary skilled artisan that any of the network nodes shown on Fig. 1 can be equipped with the same kind of NIC to receive the claimed speed advantage [See col. 20, line 65 – col. 21, line 2; claims 1-60, wherein the invented NIC and its associated methods are situated in a generic computer node residing on a generic network] . As such, it is clear that when the CPU of node 276 responds to an ARP request, its MAC and IP must be provided to the local NIC because the latter is the only contact point to the local Ethernet.

7. As to claims 2-3, Bennett further teaches that said CPU provides to said CPD an address in local host memory for storing or retrieving application data from said message [col.8, lines 24-

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32; note that the DMA controller must obtain an address from the CPU (via device driver) in order to perform necessary data movement].

8. As to claim 4, Bennett further teaches that said CPD is connected to said CPU by a bus [37, Fig.3].

9. As to claim 5, Bennett further teaches that said CPD includes a microprocessor [col.9, lines 37-43].

10. As to claims 6-7, Bennett further teaches that said CPD is connected to an input/output (I/O) controller [col.8, lines 2-11].

11. As to claim 8, Bennett teaches that the system further comprises a memory that is disposed in said host and accessible by said CPU and said CPD [e.g., 114, Fig.3].

12. As to claim 10, Bennett further teaches that said CPD is integrated with a peripheral component interconnect (PCI) bridge [e.g., two PCI bridges 9080 are integrated with the network processor in Fig.9].

13. As to claim 11, Bennett further teaches that said CPD is integrated with a memory controller for said CPU [e.g., 926, 928, Fig.9; col.9, lines 44-52].

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14. As to claim 12, Bennett further teaches that said CPD is integrated with an I/O controller [e.g., 912, 914, Fig.9] and a memory controller [926, 928, Fig.9] for said CPU.

15. As to claim 13, Bennett further teaches that said CPD is connected with an I/O controller that connects said CPD to a memory controller for said CPU [Fig.9; col.24, lines 13-64].

16. As to claim 14, Bennett further teaches that said CPD is connected to a hub interface bus that connects a memory controller to an I/O controller [e.g., 30, Fig.3; col.5, lines 11-18].

17. As to claim 16, Bennett further teaches that said message is received from the network by the local host [col.21, lines 3-37; note that the message in this passage is transferred from the remote node].

18. As to claims 17-27 and 29-40, since the features of these claims can also be found in claims 1, 4-6, 8, 10-14 and 16, they are rejected for the same reasons set forth in the rejection of claims 1, 4-6, 8, 10-14 and 16 above.

Note that the “second network packet” of claim 30 is mapped to Bennett’s ACK packet (see the passages cited in the rejection of claim 1 above) and the term “classifying a second network packet” is being construed as “identifying an ACK packet” in accordance with Bennett’s teachings.

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19. As to claim 42, Bennett further teaches that said second network packet is received from the network by the local host [e.g., col.25 lines 32-34].

20. Claims 28 and 41 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

21. Applicant's previous amendment, which was filed 11/17/05, necessitated the new ground(s) of rejection presented in this Office action. Accordingly, THIS ACTION IS MADE FINAL. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

22. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Wen-Tai Lin whose telephone number is (571)272-3969. The examiner can normally be reached on Monday-Friday (8:00-5:00) .

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nathan Flynn can be reached on (571)272-1915. The fax phone numbers for the organization where this application or proceeding is assigned are as follows:

(571) 273-8300 for official communications; and

(571) 273-3969 for status inquires draft communication.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Wen-Tai Lin

June 19, 2008

/Wen-Tai Lin/

Primary Examiner, Art Unit 2154